Metal and Material Physics Division
Fachverband Metall- und Materialphysik (MM)

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Overview of Invited Talks and Sessions

(Lecture halls SCH A 118, SCH A 215, SCH A 216, and SCH A 251; Poster P2/OG1+2)

Invited Talks

MM 2.1	Mon	9:30–10:00	SCH A 251	**Function follows form: on tailoring functional materials via microstructural design** — •Erica Lilleodden
MM 7.1	Mon	15:00–15:30	SCH A 251	**Molecular dynamics simulations of shock waves in alloys: Interplay of defects and phase transition** — •Nina Merkert
MM 13.1	Tue	9:30–10:00	SCH A 251	**Exploring the Slow Dynamics of Interfaces and Glasses via Markov State Models** — Siavash Soltani, Joerg Rottler, •Chad Sinclair
MM 24.1	Wed	9:30–10:00	SCH A 251	**Characterization of hydrogen effect on mechanical properties of metals at different length scales** — •Afrooz Barnoush, Prince Baranwal, Hanan Farhat
MM 30.1	Wed	15:00–15:30	SCH A 251	**Direct observations of grain boundary phase transformations in metallic alloys** — •Christian Liebscher

Invited Talks of the joint Symposium SKM Dissertation Prize 2023 (SYSD)

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	9:30–10:00	HSZ 04	**Diffusion of antibodies in solution: from individual proteins to phase separation domains** — •Anita Girelli
SYSD 1.2	Mon	10:00–10:30	HSZ 04	**Intermediate Filament Mechanics Across Scales** — •Anna V. Schepers
SYSD 1.3	Mon	10:30–11:00	HSZ 04	**Ultrafast Probing and Coherent Vibrational Control of a Surface Structural Phase Transition** — •Jan Gerrit Horstmann
SYSD 1.4	Mon	11:00–11:30	HSZ 04	**Electro-active metasurfaces employing metal-to-insulator phase transitions** — •Julian Karst
SYSD 1.5	Mon	11:30–12:00	HSZ 04	**The role of unconventional symmetries in the dynamics of many-body systems** — •Pablo Sala

Invited Talks of the joint Symposium Green Magnets for Efficient Energy Conversion (SYGM)

See SYGM for the full program of the symposium.

SYGM 1.1	Mon	15:00–15:30	HSZ 01	**Data mining protocols for functional magnetic materials** — •olle Eriksson
SYGM 1.2	Mon	15:30–16:00	HSZ 01	**High performance permanent magnets; elements criticality, new demands, and extrinsic magnetic properties** — •Hossein Sepehri-Amin, Xin Tang, Tadakatsu Ohkubo, Kazuhiro Hono
SYGM 1.3	Mon	16:00–16:30	HSZ 01	**Magnetic shape memory Heuslers: microstructure-related effects on the martensitic transformation** — •Franca Albertini
SYGM 1.4	Mon	16:45–17:15	HSZ 01	**Thin film combinatorial studies of hard magnetic materials** — •Nora Dempsey

SYGM 1.5	Mon	17:15–17:45	HSZ 01	**Magnetocaloric materials for energy-efficient thermal control systems** — •Victorino Franco, Aun N. Khan, Jorge Revuelta-Losada, Álvaro Díaz-García, Luis M. Moreno-Ramírez, Jia Yan Law

Invited Talks of the joint Symposium Topological Superconductor-Magnet Heterostructures (SYTS)

See SYTS for the full program of the symposium.

SYTS 1.1	Thu	15:00–15:30	HSZ 01	**Blending of superconductivity and magnetism via topological solitons** — •Christos Panagopoulos
SYTS 1.2	Thu	15:30–16:00	HSZ 01	**Topological landscaping in magnet-superconductor heterostructures** — •Sebastián A. Díaz
SYTS 1.3	Thu	16:00–16:30	HSZ 01	**Experimental study of minigaps and end states in bottom-up designed multi-orbital Shiba chains** — •Jens Wiebe
SYTS 1.4	Thu	16:45–17:15	HSZ 01	**Quantum spins and hybridization in artificially-constructed chains of magnetic adatoms on superconducting 2H-$NbSe_2$** — •Katharina J. Franke
SYTS 1.5	Thu	17:15–17:45	HSZ 01	**Braiding of Majorana zero modes** — •Stephan Rachel

Sessions

MM 1.1–1.1	Sun	16:00–18:00	HSZ 03	**Hands-on Tutorial on Workflows for Materials Science Simulation (joint session MM/TUT)**
MM 2.1–2.1	Mon	9:30–10:00	SCH A 251	**Invited Talk: Lilleodden**
MM 3.1–3.10	Mon	10:15–13:00	SCH A 251	**Development of Computational Methods: Evaporation, Growth and Oxidation – Density Functional, Tight Binding**
MM 4.1–4.7	Mon	10:15–13:00	SCH A 216	**Topical Session: Fundamentals of Fracture – Micromechanical Fracture Experiments**
MM 5.1–5.10	Mon	10:15–13:00	SCH A 215	**Materials in Energy Conversion: Mechanical Properties and Solid State Batteries**
MM 6.1–6.10	Mon	10:15–13:00	SCH A 118	**Transport in Materials: Ion, Charge and Heat Transport**
MM 7.1–7.1	Mon	15:00–15:30	SCH A 251	**Invited Talk: Merkert**
MM 8.1–8.7	Mon	15:45–17:45	SCH A 251	**Development of Computational Methods: Diverse Topics and Machine Learning**
MM 9.1–9.7	Mon	15:45–18:00	SCH A 216	**Topical Session: Fundamentals of Fracture – Interface Fracture**
MM 10.1–10.4	Mon	15:45–16:45	SCH A 215	**Materials for Storage and Conversion of Energy: New Storage Materials**
MM 11.1–11.5	Mon	17:00–18:15	SCH A 215	**Functional Materials: Performance, Reliability and Degradation**
MM 12.1–12.37	Mon	18:15–20:00	P2/OG1+2	**Poster I**
MM 13.1–13.1	Tue	9:30–10:00	SCH A 251	**Invited Talk: Sinclair**
MM 14.1–14.10	Tue	10:15–13:00	SCH A 251	**Development of Computational Methods: Thermodynamics and Local Chemistry, Electronic Structure**
MM 15.1–15.9	Tue	10:15–13:00	SCH A 216	**Topical Session: Fundamentals of Fracture – Atomistic Studies of Fracture**
MM 16.1–16.10	Tue	10:15–13:00	SCH A 215	**Energy Conversion**
MM 17.1–17.4	Tue	10:15–11:15	SCH A 118	**Phase Transformations: Microstructural Transformations**
MM 18.1–18.6	Tue	11:30–13:00	SCH A 118	**Transport in Materials: Metals, Alloys and Oxides**
MM 19.1–19.5	Tue	14:15–15:30	SCH A 251	**Development of Computational Methods: Simulation Methods – Theory**
MM 20.1–20.5	Tue	14:15–15:30	SCH A 216	**Topical Session: Fundamentals of Fracture – Microstructure Impact on Fracture (Experiments)**
MM 21.1–21.5	Tue	14:15–15:30	SCH A 215	**Materials for Storage and Conversion of Energy: Energy Conversion**
MM 22.1–22.6	Tue	14:15–15:45	SCH A 118	**Mechanical Properties and Alloy Design: Porous and Nanostructured Materials**
MM 23.1–23.35	Tue	18:15–20:00	P2/OG1+2	**Poster II**

MM 24.1–24.1	Wed	9:30–10:00	SCH A 251	**Invited Talk: Barnoush**
MM 25.1–25.5	Wed	10:15–11:30	SCH A 251	**Development of Computational Methods: Crystal Structure and Properties**
MM 26.1–26.10	Wed	10:15–13:00	SCH A 216	**Interface Controlled Properties and Nanomaterials: Grain Boundaries and Stability, Spectroscopy and Interatomic Potentials**
MM 27.1–27.10	Wed	10:15–13:00	SCH A 215	**Hydrogen in Materials**
MM 28.1–28.9	Wed	10:15–12:45	SCH A 118	**Liquid and Amorphous Metals**
MM 29.1–29.5	Wed	11:45–13:00	SCH A 251	**Data Driven Materials Science: Big Data and Work Flows – Electronic Structure**
MM 30.1–30.1	Wed	15:00–15:30	SCH A 251	**Invited Talk: Liebscher**
MM 31.1–31.10	Wed	15:45–18:30	SCH A 251	**Data Driven Materials Science: Big Data and Work Flows – Machine Learning**
MM 32.1–32.8	Wed	15:45–18:30	SCH A 216	**Topical Session: Defect Phases I**
MM 33.1–33.8	Wed	15:45–18:00	SCH A 215	**Topical Session: Fundamentals of Fracture – Amorphous Metals**
MM 34	Wed	18:45–19:45	SCH A 251	**Members' Assembly**
MM 35.1–35.1	Thu	9:30–10:00	SCH A 251	**Invited Talk: Champion**
MM 36.1–36.11	Thu	10:15–13:15	SCH A 251	**Data Driven Materials Science: Big Data and Work Flows – Microstructure-Property-Relationships (joint session MM/CPP)**
MM 37.1–37.8	Thu	10:15–13:00	SCH A 216	**Topical Session: Defect Phases II**
MM 38.1–38.3	Thu	10:15–11:15	SCH A 215	**Topical Session: Fundamentals of Fracture – Fracture Experiments**
MM 39.1–39.6	Thu	11:45–13:15	SCH A 215	**Phase Transformations: Simulation and Machine Learning**
MM 40.1–40.10	Thu	15:45–18:30	SCH A 251	**Mechanical Properties and Allloy Design**
MM 41.1–41.7	Thu	15:45–18:00	SCH A 216	**Topical Session: Defect Phases III**
MM 42.1–42.10	Thu	15:45–18:30	SCH A 215	**Interface Controlled Properties and Nanomaterials: Nanoporous Materials and Nanolaminates**

Members' Assembly of the Metal and Material Physics Division

Wednesday 18:45–19:45 SCH A 251